The Carolina Farmer

COVERING THE CAROLINAS FROM THE MOUNTAINS TO THE SEA

VOLUME II FEBRUARY, 1947 NUMBER 2

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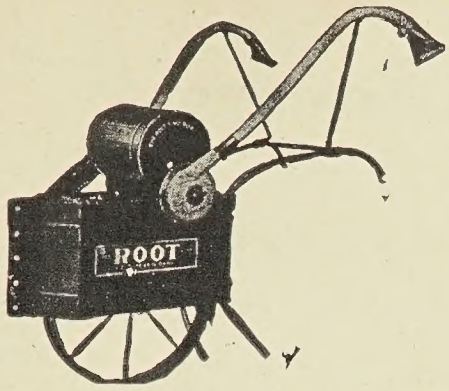

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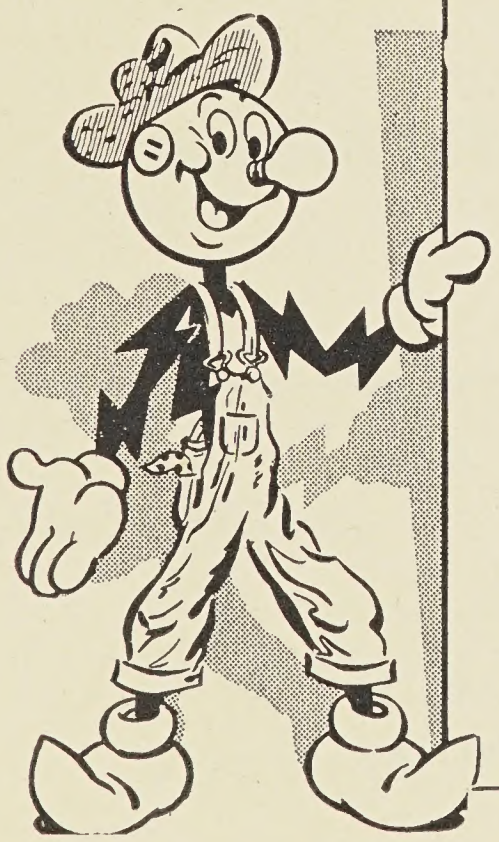

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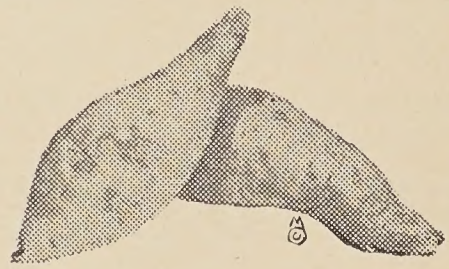

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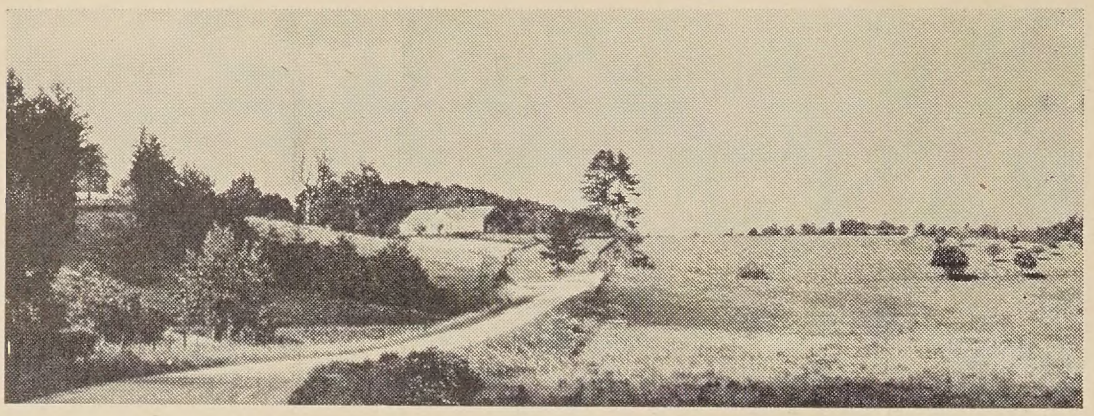

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OUR FRONT COVER

Golden Gobs of Goodness which are rapidly taking their place beside the Golden Leaf among the leading cash crops of the Carolinas

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"Yam" Facts

New Sweet Potato Warehouse Planned for Whiteville, N. C.

The opening of a large sweet potato warehouse in Whiteville, N. C., has been announced by L. P. Ward, Carl Stevens and Clifton Stevens of Clarendon, N. C. The Stevens brothers and Mr. Ward have purchased a lot on East Columbus Street in Whiteville and plan to erect a warehouse of from 50 to 60 thousand square feet.

All three have long been associated with the sweet potato industry in both growing and marketing potatoes. At present they are operating a sweet potato house at Clarendon, N. C., where from 75,000 to 100,000 bushels of sweet poatoes are being handled annually. It is understood that they will move their Clarendon business to Whiteville when the new warehouse is completed.

The erection of this warehouse will mark the beginning of a sweet potato market for Whiteville.

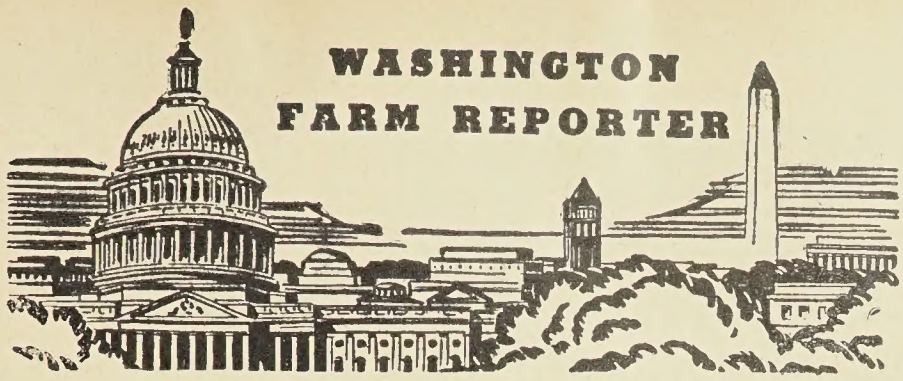
Experimental data from several experiment stations in the South have shown that dehydrated sweet potatoes, commonly called sweet potato meal is approximately equal to corn as a carbohydrate feed for beef and dairy cattle.

Sweet Potato Equals Starch Plus Cattle Feed

"Down in the Florida Everglades a large sugar corporation has started large scale production of sweet potato starch in a new factory which is the largest of its kind in the world," says Dr. Louis B. Howard of the U. S. Department of Agriculture in an article in the winter issue of Land Policy Review.

"This was built on the faith the company officials had in the work on sweet potato starch the Bureau of Agricultural and Industrial Chemistry has carried on for more than ten years," continued Dr. Howard, who is chief of that Bureau.

"Scientists in the Southern Laboratory, where the sweet potato utilization work is done, supplied a great deal of the technical information needed in the construction and initial operation of this new plant, which will consume the annual crop from around 12,000 acres of sweet potatoes. A bushel of these potatoes produces from 11 to 13 pounds of starch and about 5 pounds of cattle feed. The cattle feed contains from 85 to 90 percent of the feeding value of corn, and is fed along with other mixtures to more than 2,000 head of cattle that are being continuously fattened on the company's holdings."



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What Price Erosion?

The heavy costs of erosion—approximately $3,844,000,000 annually in the United States alone—will be sharply cut in the comparatively near future, declared H. H. Bennett, Chief of the Soil Conservation Service.

Mr. Bennett was speaking before the Princeton University Bicentennial Conference October 2. He based his statement on the increasing acceptance of American farmers to the program of land technology now being offered by the Soil Conservation Service.

"On August 15," he said, "there were more than 1,670 soil conservation districts in the United States, voluntarily voted into existence by the farmers themselves. These districts encompassed more than 900 million acres and aproximately 4 million farms. Farmers are continuing to organize districts at the rate of approximately 25 a month.

"The basic principles underlying the new land technology developed in the United States during the past 14 years by the Soil Conservation Service are being applied to an ever increasing area of land by American farmers, acting with the assistance of Service technicians.

"By the middle of 1947, more than 100 million acres in all parts of the United States will be farmed in this modern conservation way. That is, each of the 100 million acres will be used according to its individual capabilities and will be treated according to its conservation needs.

"In soil conservation districts the farmers themselves decide what they want to do to improve their land and water resources, and how they want to go about doing it. Then they proceed along this course, working together and utilizing all the available facilities and services they can command. In almost every instance, districts are obtaining technical guidance from the Soil Conversation Service.

"By increasing the per-acre, per-farm and per-nation supply of food and fiber, conservation technology can provide the basis for an improved standard of living and simultaneously reduce the hunger and discontent among the people, which so frequently leads to discord, dictatorships and war.

"For these and other reasons, the application of land technology is certain to spread around the world, either voluntarily or by decree. By the year 1996, this world journey probably will be well advanced. By that year or before it will have accomplished changes in agriculture tantamount to a beneficial revolution on the land."

Price Support Program

The 80th Congress will have to act promptly to clarify the government's price support program, is the opinion expressed recently by Representative Hope, the Republican party's selection for next chairman of the House Agriculture Committee. Agriculture's immediate post-war problem is to bring production within a reasonable balance with demand, he advises.

Hope is of the opinion that it may be necessary to limit the payment of support prices under the Steagall amendment. "The guaranty," said Hope, "may stimulate production beyond existing needs and we'll get a situation similar to that which affected potatoes this year. Congress will probably have to give consideration to the limitation of the quantity of each commodity on which the guaranty will be applicable."

Other matters of farm policy being considered by the Republicans of the House Agriculture Committee are: The continuation and possible intensification of conservation practices; increased research in the field of marketing agricultural products; and intensified educational program on nutrition among consumers; decrease the restrictions on acreage; a dual price system for the international commodities such as wheat which can be used for purposes other than food; international commodity agreements among producer and consumer nations; expansion of the Rural Electrification Administration and improved farm-to-market road systems; revision of the parity formula to include labor costs, and bring parity index up to date in order to establish a better relationship between parity prices of agricultural commodities and between parity prices and present cost of production.

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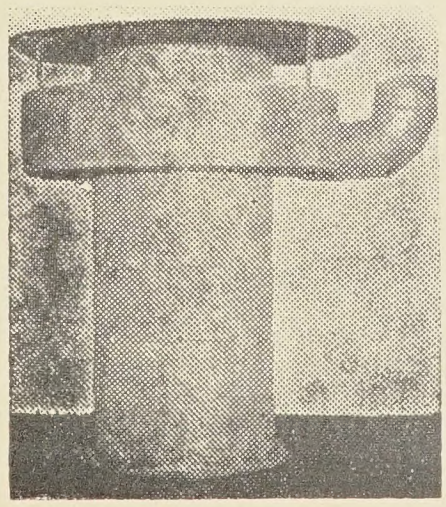

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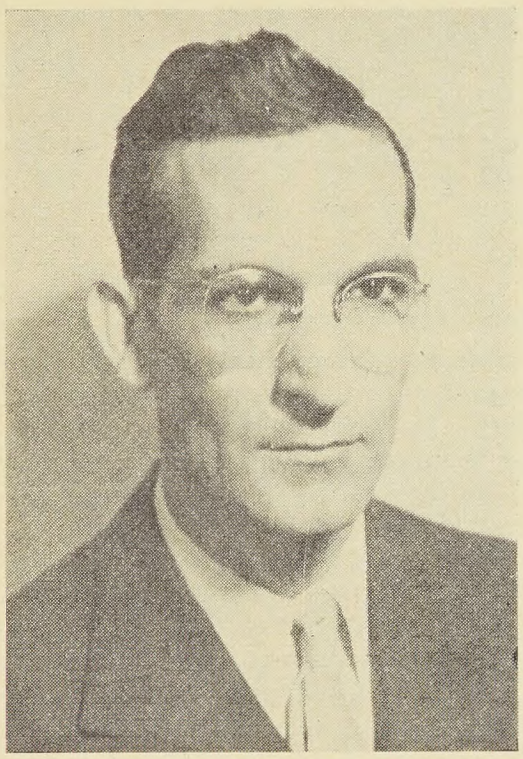
The Carolina Sweet Potato Council – Why?

By A. R. HOWARD, *Secretary*

THE Carolinas Sweet Potato Council was organized to furnish a medium for the co-ordination of the efforts of the several factors—growers, dealers, processors, governmental educational agencies and interested commercial agricultural agencies—in further promoting and developing the sweet potato crop as a source of major cash income for our two states. It is not intended as a sweet potato sales organization, nor is it intended to supplant any of the efforts of the edueational forces that have long worked on this problem, but will supplement, encourage and support these factors and act as a clearing house for information.



A. R. HOWARD

It has long been recognized that sweet potatoes hold outstanding possibilities for development in the south as a whole, and especially in the Carolinas. During the past several years much work has been done by governmental research and educational institutions, as well as others, with this crop, but most of such work has been done individually and separately and oftentimes spasmotically with no plan of development guiding and co-ordinating the efforts. In the commercial world the sweet potato deal of the two Carolinas is looked upon as one deal, as indeed it is, but in its treatment by edueational forces it has been handled separately, and information developed or work done in one state has had no channel except chance communications to flow across the eommon boundary of the two states.

Too often in the past there has been a vast chasm between the educational and promotional forces working with the crop and one of the deal's principal components—the dealers. Too often the function of the local dealers and the neeessary services they render have been ignored, when in actnality they should be the principal force in getting the promotional and edncational work done.

The need for this type of work is emphasized by a review of the history of the sweet potato industry in these and competing states and by briefly glancing at the potential demand that must be developed for the product if we are to continue in the deal.

During the twenties, the combined shipments from North and South Carolina varied from slightly less than one thousand of nearly two thousand carloads each year. During the same period Louisiana was showing a fluctuation, but definite increase beginning with 573 cars in 1920 and gradually increasing to 1,456 ears in 1929. During this 10-year period the Carolinas led in shipments over Louisiana six years and Louisiana exceeded in four. Beginning in 1930 the Carolinas' shipments experieneed a steady decline to 1938 during which year the combined shipments of the two states were only 668 cars, while during the same period Louisiana was experiencing a definite inerease trend shipping 3,136 cars in 1938. Since 1939 the Carolinas have shown a slight increase, varying from slightly below to slightly above 1,000 cars. During this late period, the Louisana industry has continued its steady growth and in 1945 shipped, 7,981 cars compared to 1,031 cars from the Carolinas.

From the above discussion and the figures given below it will be seen that we are only now reaching the commercial position we occupied in the 1920's and if we are to continue to grow in proportion to our possibilities, the industry needs the combined and organized efforts of all concerned.

COMPARATIVE CAR-LOT SHIPMENTS OF SWEET POTATOES

AVERAGES—5 YEAR PERIODS

	1920-4	1925-9	1930-4	1935-9
North and South Carolina	911	1,499	828	763
Louisiana	740	1,374	1,245	2,889
Georgia	993	596	225	49

YEARS

	1940	1941	1942	1943	1944	1945
North and South Carolina	682	698	1,328	1,288	949	1,031
Louisiana	2,090	2,844	4,110	3,877	5,454	7,981
Georgia	4	8	5	41	44	41

The progress made in Louisiana is due in no small part to the organized efforts of all concerned—research institutions, educational forces, dealers and producers—in promoting the production of a quality product and selling that product to the market. This state has for the past several years had an organization known as the Louisiana Sweet Potato Association whose members are made up of growers, dealers, and all other interested persons to promote the interest of the deal. The strength of this organization is partially shown by the fact that approximately 4,000 people attended its annual meeting in 1946. The Louisiana Association is primarily responsible for the passage of a state law levying a 2 cent per bushel tax on each bushel shipped in Louisiana which has resulted in a sizeable fund that is being used to advertise Louisiana potatoes on northern markets.

During the past several months other southern states have also reeognized the possibility of further developing this crop through organized efforts and the necessity of such to meet competition and thus similar sweet potato conncils or associations whose purposes are to promote and develop have been organized in Georgia, Alabama, Texas and Mississppi.

In the eommercial development of this crop throughout the South, the

(Continued on Page 22)

GOOD SEED VITALLY ESSENTIAL

By J. Y. LASSITER, *Sweet Potato Expert*
H. Weil & Brothers, Goldsboro, N. C.

IN the next few weeks thousands of farmers in North and South Carolina will desire certified sweet potato seed stock for their 1947 crop. Farmers who do not already know reliable sources should contact at once their Vocational Agriculture Teacher, County Farm Agent, Crop Improvement Association, State Extension Horticulturist or State Department of Agriculture for this information, for much progress has been made by many farmers during the past three years with "hill selection" at harvest time in cooperation with efforts made by Extension Services, State Departments of Agriculture and Crop Improvement Associations.

Selection of Seed

Research in the southeast has indicated that the best, diseased-free sweet potato seed are by far cheaper to the growers and definitely the first essential in producing a successful crop. There are many varieties and strains of sweet potatoes but our consuming public has taught us that the most important strain and variety at the present time is a copper skin, salmon pink interior La. Strain Porto Rico for table use or a combination of table use and livestock feed. The most desirable seed size is somewhat cylindrical, tapering to a rounded point at each end with a diameter of about two and one-half to three inches and a length of about five inches. By all means know the seed are definitely free from wilt, scurf, black rot or internal breakdown. Small, stringy sweet potato seed are not recommended for such seed produce small weak plants that do not survive in the field.

Seed Treatments

The purchased or selected seed should be disinfected by dipping for one minute in a solution of one pound of Semesan Bel per 7 1-2 gallons of water or dipped for 10 minutes in a solution of Corrosive Sublimate (bichloride of mercury) one oz. to eight gallons of water, or dip seed in and out of a solution of wettable spergon (2 oz. per gallon of water). The seed are then ready for bedding. *Use wooden barrel in treating,* for chemicals corrode metal.

Seed Requirements Per Acre

Most farmers bed five bushels for each acre to be set in the field if three settings are to be made. Ten bushels for each acre to be set at one setting. A bushel of seed sweet potatoes should produce 2500 to 3000 plants over several pullings and 12,500 plants are required to set an acre spaced 12 inches in 3 1-2 foot rows. A bushel of seed bedded will occupy 12 to 15 square ft. The smaller the seed, the more space required. Some of the small growers in North Carolina are bedding 10 bushels of seed for an early planting of one acre so as to make vine cuttings from this acre to set 4 or 5 acres. They also later set 1 1-2 acres from the second and third pullings of plants from the bed which give them a total acreage of approximately 7 1-2 acres from 10 bushels bedded. When sweet potatoes are bedded in the "Mammy Bed" or "Mother Patch," they are laid end to end in the drill in three foot rows. This reqiures approximately 100 bushels of seed per acre, which will furnish vine cuttings to set 10 to 12 acres of potatoes.

Propagation

Sweet potato plants are grown in the open in rows or beds, in cold frames, flue-heated, manure heated and electrically heated hot beds. The heated beds are for forcing early plants either for an early green market crop or an early planting so vine cuttings can be made.

The sweet potato bed whether in open or heated beds should be prepared well in advance of bedding time on well drained soil that has not grown sweet potatoes. If the seed are to be bedded in open beds or the field, apply 1000 pounds of a 6-8-6 fertilizer per acre. This fertilizer should be well mixed with the soil before bedding. Bed the seed 4 to 6 weeks before the first desirable setting date. However, if the desirable setting date is in April, a hot bed will be necessary for forcing the plants. Then the bed should be boarded around—5 feet wide and as long as neccssary for the required bushels to be bedded and covered with muslin cloth (55 to 60 strands per inch) dipped in linseed oil with one pint of Japanese drier added per gallon. This cloth can be placed over the bed so as to be rolled like a window shade. This will make ventilation easier for the grower. Watering and ventilation are the most important factors after seed is covered with two inches of clean soil, sand or sawdust. By all means, keep beds moist but never water-logged. Many growers have found small gasoline or electric pumps very profitable where water is accessible.

Food for Thought

Sweet potatoes are the most important Horticultural crop in the south. It is recognized as containing important sources of Vitamins A, B, C, and G. They are one to two times as potent in Vitamin A as the best summer butter and are a richer source of this important vitamin than even carrots. They are also an important source of Vitamin C, equal tomato juice in potency of this vitamin. In addition to their high vitamin contents they are pleasing to the taste and are rich in energy - producing carbohydrates, calories and many of the minerals.

With modern dehydration plants, the entire crop can be saved even including the vines which are equivalent to the best alfalfa hay when properly processed. The strings, jumbos, culls, etc. are approximately equivalent to corn in feed value when dehydrated. Many farmers are reporting yields of 300 to 500 bushels per acre—Are you considering sweet potato acreage in your 1947 farm plan?

FERTILIZER SUPPLY SHORT

An appraisal of the prospective supply of commercial fertilizer, made by the Agriculture Department at the request of the Industry Advisory Committee, indicates that supplies are not expected to equal demand during the next few months.

"Although the supply of fertilizer for American agriculture for the current fiscal year is near record levels," the Department said, "and is more than double the prewar consumption, the demand is considerably in excess of supply, especially with respect to nitrogenous materials."

Nitrogen supply is estimated at nearly 700,000 tons, about the same as for last year. The amount programmed for export has been reduced from 97,000 to 67,000 tons, compared with 73,000 tons exported last year.

DAVIDSON COUNTY
Looks To Sweet Potato Future

By **DICK CROOK**
Assistant County Agent
Davidson County, N. C.

THE most important horticultural crop in the South is the sweet potato, and is second only to the Irish potato crop for the entire nation. Figures show that 72,500,000 bushels of sweet potatoes were produced in 1943 with a value of 68 million dollars.

For a number of years Davidson County has ranked third in North Carolina in production of sweet potatoes. The yield per acre of sweet potatoes has gradually increased from 91.4 bushels per acre in 1890 to 134.8 bushels in 1940. This has been due to better cultural practices that the farmers have carried out. Through the experiments conducted at the State Experiment Station, recommendations have been compiled that have greatly increased the yields per acre over the state.

A few of the up-to-date practices that are being followed by farmers today are 3- to 3½-foot rows, spacing of 10 to 14 inches, using 1,000 pounds of a 3-3-9 fertilizer and a bed at least 14 inches high. Close spacing tends to reduce the number of large Jumbos, and greater amounts of fertilizer increase the yield per acre.

From the latest figures that can be obtained, there are about 2,120 acres of sweet potatoes planted in the county with a production of 350,802 bushels and an approximate value of $701,604.

Most of the sweet potatoes in the county are marketed by three sources, namely: truckers or produce buyers, retail and through local stores in the county and surrounding towns and cities. Truckers from various points come into the county and buy potatoes direct from the farmers. This is the principal source of marketing potatoes in the county. Some potatoes are sold or peddled to individuals and others sold to stores which in turn retail the potatoes to the consumer.

The varieties of potatoes grown in the county are the Copper Skin Porto Rico and the Nancy Hall. The Copper Skin Porto Ricos are fast replacing the Nancy Halls, due chiefly to the market demanding the Porto Rican potato.

Potatoes begin to move to market at digging time, which is the latter part of September and the month of October. Potatoes must be harvested before frost, as potatoes will not keep in storage if harvested after a heavy frost has fallen on them. Most of the potatoes grown in the county are stored in houses and sold as cured potatoes from December on. Not having a readily available green market, the potatoes have to be stored until a market for them can be found. There is no green or cured market available where a farmer can sell his potatoes when he wishes. It is hoped that a packing shed and market can be made available for the producers by the time their 1947 crop has to be marketed.

Sweet Potato Meal Excellent Dairy Feed

Dehydration of sweet potato culls, Jumbos and unmarketable potatoes is fast coming to the front as feed for cattle. The nearest dehydration plant to the farmers of Davidson County is located at Newton, N. C. With the acreage of potatoes planted in the county, a dehydration plant located in the county would be of great help to the farmers. Dehydrated potatoes are equal to corn in cattle rations and three bushels of green potatoes will yield one bushel of dehydrated product. A three hundred bushel yield of potatoes is equal to a hundred bushel corn crop per acre.

Jimmy Sink, of Lexington, N. C., Route 1, a 4-H club boy of the Welcome club, has secured a ton of potato meal from the dehydration plant at Newton and is substituting this meal for corn in the ration he is feeding his 4-H baby beef cattle. Jimmy's calf will be shown in the Greensboro Fat Cattle Show and Sale in June. This is the first animal in the county to be fed sweet potato meal.

Most of the potatoes produced in

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U. S. GRADES AND THEIR USES IN MARKETING SWEET POTATOES

By **J. B. GOURLAY**
Marketing Specialist, N. C. Department of Agriculture

DURING the war period emphasis was on production. This condition is rapidly changing, not only with sweet potatoes but practically all commodities. Consumers and the trade in general are demanding better quality products.

Some new sections have begun to produce sweet potatoes. With new and expanded production areas expected to be bidding for market outlets, competition will no doubt grow keener. Only those who can and will produce high yields of good quality may expect to produce this crop at a profit. It is, therefore, suggested that sweet potato growers secure the best seed stock available, select the proper type of soil for producing this crop, properly treat the seed and plants to prevent or retard diseases, follow the best known cultural practices, and use extreme care in harvesting, handling, storing, curing, grading and packing sweet potatoes.

The United States standards and grades for sweet potatoes are available for use by farmers as well as shippers, and those who wish to grade their potatoes according to a definite system should become familiar with the government standards. The North and South Carolina Departments of Agriculture maintain cooperative inspection service and assist farmers in marketing their products. Inspectors are highly trained and can not only inspect sweet potatoes for grade but will gladly show farmers and packers what specimens should be culled and how to pack their containers in accordance with recognized commercial practices.

The U. S. standards and grades are simply measuring sticks of quality and basis for buying and selling. For example, by applying the standards, a buyer in a distant market may buy sweet potatoes from a producer or shipper in the Carolinas without actually seeing the potatoes by speci-

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A Program for Sweet

Carolina Sweet Potatoes Are Through Our Salesmanship

AS with all industry, this is a time of re-adjustment in southern agriculture. The South with its long time record of one and two crop dependency and its abundance of cheap labor is faced with the neccssity of crop diversification balanced with livestock production and the employment of more and more farm machinery in place of man labor.

The sweet potato is destined to play a major role in the re-adjustment of southern agriculture. This is partially true because there is no other crop as versatile and no other crop better adapted to southern growing conditions. Development of the sweet potato crop should follow as least three channels: (1) Potatoes for human consumption in the fresh state (2)processed potatoes for human consumption and, (3) dehydrated potatoes for livestock feed.

Fresh Market Potatoes

Since pioneer days the moist type sweet potato, often called "Southern Yams," have graced the tables of both rich and poor in the South, but people of other sections have not eaten sweet potatoes in any appreciable quantity. This is due, in part, to the fact that until late years northern and western people have been acquainted with only the dry white sweet potato grown in those areas. This fact is forcibly brought out with the realization that the annual per capita consumption of sweet potatoes in the country as a whole is only approximately 22 pounds, which compares with the per capita consumption of 122 pounds of Irish potatoes. While the national consumption is only 22 pounds, it is reliably estimated that the annual per capita consumption in seven of the Southern states is more than 100 pounds. Compare this with the per capita consumption of only about 5 pounds in northern and western states, or one-twentieth that of the southern states, and it is realized that the north and west represent almost unlimited potential demand and the possibility of expansion of market outlets through organized development. New and increased market demand can be developed but only by placing *quality* products on the markets and through a good job of *salesmanship.*

The job of increasing consumption of sweet potatoes in areas other than the South, has been facilitated by at least two war-time factors. One of these is the vast number of northern and western people that were served and learned to like southern type yams while in the armed services. The second is the food value consciousness awakened in our people during the war. Southern sweet potatoes are now recognized as important sources of vitamins A, B, C and G. They are a richer source of vitamin A than the much publicized carrot and are an important source of vitamin C, equalling tomato juice in the potency of this vitamin. They are pleasing to the taste and are rich in energy producing carbohydrates, calories and many of the minerals.

Thus in sweet potatoes for fresh market we have an outstanding product to sell and a potential market that only awaits the selling. An equal per capita consumption with Irish potatoes should be the goal, but even increasing the present consumption in the north and west from 5 to 10, 15 or 20 pounds, the present exports could be doubled, trebled, or quadrupled.

This can only be done through concerted action of the entire industry, first by placing only quality potatoes, closely graded and attractively packaged on the market and secondly through the salesmanship of the entire industry including advertising to acquaint the housewives with the food value of our potatoes.

Processing for Human Consumption

The sweet potato being a root crop makes it impossible to harvest the entire crop at one time, and thus it will be impossible to reach a degree of perfection where the entirc crop when harvested will be the size and shape to make an attractive package for sale in the fresh state. There will always be a percentage of the crop that will be too large, too small or marred by minor growth characteristics, and although possessing the same internal quality as the well shaped potatoes they will not find a ready sale on the fresh markets. These potatoes should be processed for human consumption.

Processing through canning holds outstanding promise for the utilization of these off-shaped or middle grade potatoes that possess a high degree of internal quality. Already the canned sweet potato has found a ready acceptance on the market, however, the potential market is as unlimited. It is expected that with organized promotion sales the restaurant, cafe, and hotel field will provc an attractive outlet for large quantities of canned potatoes. These establishments like to have stores of vegetables in a staple form that can be prepared on quick notice.

Other fields of processing for human consumption that should be

VITAMIN CONTENT OF SWEET POTATOES AND OTHER FOODS

		*VITAMIN POTENCY			
Food	**Amount**	**A**	**B-1**	**C**	**G**
SWEET POTATO	1 Medium Size	5,200	30	250	50
Carrots	½ cup cooked	3,200	10	35	40
Carrots, raw	1 large	3,850	12	70	50
Tomatoes	½ cup cooked	1,050	35	300	—
Potatoes, white	1 medium size	80	50	400	40
Butter	¼ oz.	150	11	—	14

* In International Units except G given in Sherman-Bourquin Units.

Potato Development

Rapidly Gaining Favor as a Food Of a Quality Product

By A. R. HOWARD
General Agricultural Agent
Atlantic Coast Line Railroad Company, Wilmington, N. C.

Agricultural experts are constantly working with the sweet potato farmers in an effort to obtain better crops.

exploited are dehydration, quick freezing and manufacturing into candies, breakfast foods, and other forms of edible products.

Through proper organized development, processed sweet potatoes can be made to utilize at least one-third of the sweet potatoes that will be produced in the South. However, caution that the internal quality of these potatoes must be of the very best cannot be over emphasized.

Processing for Livestock Feed

Sweet potatoes can transform the South from a region that has long been recognized as a section extremely short in carbohydrate feed to a section with a wealth of carbohydrates. The South is rich in pasture grazing and in sources of protein feeds such as cottonseed meal, peanut meal and tankage, but our low yields of corn, the chief source of carbohydrates, has held back our livestock program. The sweet potato holds promise of being the answer to this problem.

Nine different tests at five different experiment stations have been conducted to establish the comparative value of sweet potato meal (dehydrated sweet potatoes) and corn for feeding beef cattle. A study of these tests show that there has been a wide varation in the results obtained, however, a summary of the tests leads to the conclusion that sweet potato meal is approximately equal, pound for pound, to corn-cob-shuck meal and about 95 percent as efficient as ground shelled corn as a fattening ration for beef cattle.

At least two stations have conducted tests comparing sweet potato meal and corn as a feed for dairy cattle. A summary of the tests leads to the conclusion that sweet potato meal is a superior carbohydrate feed for cattle than corn, producing not only more milk, but with a superior deep yellow color, richer in vitamin A.

With modern dehydration machines developed for this purpose this phase of the industry should rapidly develop. There is approximately one-third of the sweet potato crop that is unsuited for human consumption due to size, color, disease spots, bruises, or cuts that have largely been wasted in the past. This part of the crop can now be converted into livestock feed. Each dealer, handling a substantial volume of fresh market potatoes, that has a dehydrator is in position to buy the farmer's entire crop, which in turn would encourage larger production. The finished product could then be sold back to livestock farmers or to mixed feed manufacturers. The practicability of this program is already being demonstrated by several of our largest dealers.

Thus because of its versatility, its adaptability, the potential demand for fresh market and processed for human consumption, and its value as a livestock feed—the sweet potato is destined to play a major role in southern agriculture. This development can and will come about as a result of organized effort on the part of all concerned.

How Sweet Potatoes Move To Market

By B. G. ANDREWS *and* MARTIN ABRAHAMSEN
Department of Agricultural Economics, N. C. State College
Raleigh, N. C.

STUDIES in marketing now under way by the Department of Agricultural Economics of the North Carolina State College of Agriculture show that there are several types of buyers who purchase sweet potatoes in North Carolina. The more important of these are: (1) local buyers, (2) local wholesalers, (3) trucker-hucksters, (4) stores, restaurants, and institutions, (5) produce jobbers, (6) grower-shippers, (7) terminal-market dealers, and (8) consumers (direct at their homes).

These types of buyers differ in the nature and the extent of their operations. Some have adopted modern grading and packaging practices. A limited number sell sweet potatoes "green" at harvest time; others store and cure sweet potatoes for winter and spring markets. Many have adjusted operations to change in transportation and consumer demand, while others have changed their operating practices very little in the past decade.

A large portion of the Carolina sweet potato crop is transported to the consumer via motor truck.

Types of Buyers and Their Methods of Operation

A brief description of the operations of the important types of sweet potato buyers follows:

Local buyers. Local buyers assemble sweet potatoes in the neighborhood or community. Purchases usually are made for a local wholesaler either on a commission or on an outright basis. As a general rule purchases are made at harvest time, and the sweet potatoes are delivered to the warehouse or assembly point on the same day or not later than the same week that they are obtained from growers. The main marketing service performed is that of supplying producers in the area with a cash market and of assembling from producers for local wholesalers in sufficient quantity for them to deal on a carlot basis.

Local wholesalers. These operators are located in the areas of commercial production. They, too, assemble from growers but differ from local buyers in that they handle a sufficient quantity to ship in large lots direct to terminal markets. Frequently, they operate in a production area of several counties—often maintaining cash buyers at assembly points during the harvest season. These operators usually have ample marketing facilities and storage space. This gives them considerable flexibility in the disposition of their product.

The principal functions performed by those dealers are: (1) concentration of the small production of individual farmers, (2) furnishing warehouse facilities where sweet potatoes may be stored in anticipation of more favorable market conditions, (3) furnishing growers a continuous cash market, (4) sorting, grading, and preparing sweet potatoes for market, and (5) establishing connections with reliable dealers in the best markets.

Truck-hucksters. Truck-hucksters are traveling cash buyers who canvass production areas. They make purchases direct at the farm. As a rule, they immediately resell to other buyers such as chain and independently owned grocery stores or jobber dealers in industrial areas.

Terminal-market dealers. These markets are located principally in northern cities and serve as a means of supplying jobber-dealers and retail stores. Purchases usually are made from wholesalers and grower-shippers. Wholesalers on these markets often establish connections with local wholesalers or grower-shippers. They watch prices and call for shipments when market conditions seem favorable.

Grower-shippers. Commercial growers, who produce on relatively large acreages and ship direct to terminal markets, also purchase from other growers in the surrounding area in order to maintain volume shipments throughout the season. Marketing facilities and storage space sufficient for handling carlot shipments are usually maintained on the growers' own farms.

Jobber-dealers. These dealers handle fruits and vegetables, usually operating on a jobber basis. They are located in the larger cities—often in production areas. Sweet potatoes are purchased direct from growers or are obtained by representatives in the production area. Resale is usually made to the retail trade.

Other buyers. The nature of market relations with other outlets available to farmers, such as stores, restaurants, and consumers direct, are self-explanatory. A number of small growers, as they make regular trips to town, deliver a few bushels each week to these outlets. Under these condi-

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Proper Curing Means Quality Yams

By C. J. NUSBAUM, *Associate Plant Pathologist*
Edisto Experiment Station, Blackville, S. C.

NOTE—This article is reprinted by special permission of The Sweet Potato Journal.

JUST what is the role of proper curing in maintaining good keeping quality of sweet potatoes in storage? The objectives of this important phase of the job of successful storage and the ways in which these objectives are accomplished are frequently not well understood. As a result, curing is sometimes either ignored entirely or improperly performed. It is true that sweet potatoes often keep well with very little care; nevertheless, disregard of the factors involved in the curing process may lead to serious losses from decay or deterioration in quality even though subsequent storage is properly managed. Few commercial operators can afford to take these unnecessary risks year after year, especially where sweet potatoes are harvested late in the fall after cold weather has set in thereby subjecting the crop to chilling injury.

Curing is a term applied to the process where, at the beginning of the storage period, conditions are provided for quick wound healing of sweet potatoes. All sweet potatoes are wounded when they are detached from the vine and handled during harvest operations. It is through these small cuts, bruises and broken ends that decay-producing organisms gain entrance, and it is from these areas that water loss through evaporation is greatest. Under proper curing conditions, the walls of a few layers of exposed cells in the wound become thickened and hardened during the first 24 to 48 hours. Actual and complete healing is accomplished by the production of several layers of new cells just beneath the wounded area. When healing is completed, sweet potatoes are protected against decay and drying out. In spite of the fact that these processes are well understood as the result of experimental study, the belief still persists in some sections that curing merely means the drying out of green potatoes or driving out the "field" moisture and the term "kiln dried" is still used by some in the place of the term "cured." The curing process is designed not to dry out the sweet potatoes but rather to prevent them from drying out too much. In actual practice properly cured sweet potatoes retain their bright, smooth appearance throughout the normal storage period, whereas similar stocks, improperly cured, may show shriveled ends, sunken bruises and a dull, lifeless appearance. Even though the latter may pass inspection as being sound and marketable, they will be below the standard of quality demanded by a discriminating trade.

Changes in Sweet Potatoes

During the curing period, important chemical changes also take place within the flesh of the sweet potatoes. There is a partial change in the starch, dextrin and sugar content. While affecting cooking quality, these changes presumably have little effect on keeping quality.

In order to demonstrate the value of the curing process on keeping quality of stored sweet potatoes, experiments have been conducted at the Edisto branch of the South Carolina Experiment Station at Blackville, S. C., commencing in 1943. In these tests, six one-bushel samples of U. S. No. 1 sweet potatoes were taken from diggings from the same field at about weekly intervals, beginning early in October and extending beyond the time when a freeze had killed the vines. At each digging, three bushels were put into cure under favorable conditions and three bushels were placed in common storage. At the end of a 12 to 14-day curing period, the cured lots were placed in storage with the others and storage temperatures above 50 degrees (F) were maintained throughout the remainder of the storage period. Loss in weight was recorded both at the end of the curing and storage periods and, in the spring, all samples were carefully examined for appearance, condition and loss from decay.

Dig Before Frost

The 1944-45 test, being quite representative, is discussed here in some detail. In this experiment the harvests began October 5 and continued at about weekly intervals until November 22, when a freeze killed the vines. Five additional diggings were made at shorter intervals until December 4. A frost destroyed about half the foliage on November 10. Further hard freezes occurred on December 1, 2 and 3. The entire harvest season was relatively dry with heavy rains occurring only on October 19 and light showers following on November 19, 28 and 29.

In the accompanying table are shown the average post-curing, post-storage and total weight losses and the average percentage of decay in both the cured and uncured lots from each harvest. It will be noted that, in the early and middle part of the harvest period, the cured lots lost a little more weight than the uncured lots during the curing period and less during subsequent storage. The total loss was greater in uncured samples. The weight losses in storage of the later harvests are of little significance because they are complicated by losses in weight due to decay.

Damage from decay in the uncured samples was light until the November 10 harvest, indicating that up to that time natural temperatures were favorable for curing and artifical heat was unnecessary. In late diggings, however, losses from decay were heavy in uncured lots, reaching an average of about 75 per cent by December 4. In the cured samples, losses from decay were generally light until the last harvest, but it should be pointed out that these sweet potatoes endured three freezes in the field during the 12-day period after the vines were killed on November 22. On December 3, the day before the final harvest, the temperature dropped to 26 degrees (F). The accompanying photograph shows the relative post-storage condition of both cured and uncured samples from the last four harvests. The healthy sweet potatoes in the cured samples were bright in appearance and showed no indication of flesh deterioration. The sound roots remaining in the uncured samples were mostly dull and were somewhat shrivelled. They would not have been judged satisfactory by discriminating consumers.

Chill Damages Yams

The fact that the cured roots from the late harvests kept so well tends to discount the view that injury to the freeze is due to the migration of

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Tabor City

Sweet Potato Capital

By WILLARD G. COLE
Executive Secretary
Tabor City Merchants Association

OUT of the gardens, back fields and shady nooks has come the sweet potato and moved into select farm lands to make Tabor City the sweet potato capital of the world.

Strictly speaking, the Tabor City area is composed of not only Columbus county in North Carolina but the nearby counties, and reaches over into South Carolina to take in Horry, Marion and Dillon counties.

With this rich farm territory to draw from and an aggressive leadership in the brokerage field, Tabor City has become the center of the sweet potato industry in the Carolinas and now rivals the famed production centers of Louisiana.

As evidence of the tremendous vitality of the Tabor City market, all estimates for the 1946 crop are in excess of a million bushels. This is only slightly above the previous year's figure and the growers' total in dollars will go well beyond one and three-quarter million.

For many years the sweet potato has been a prime favorite on the tables of homes throughout North Carolina and the entire South. North Carolina consumption is reportedly the highest per capita with the single exception of Georgia. However, year after year the sweet potato was grown almost entirely for use on the farms and within the state. It occupied an inconspicuous spot in back field and filled a row in the garden, but most of the world was and still is largely unaware of this nutritious vegetable.

In the Tabor City area, sweet potatoes were banked with sand for preservation throughout the off-season and this method prevailed until early in the twenties.

However, sale of the product picked up as early as 1918 during the closing months of the first World War and continued in the post-war years. The Tabor City market really originated about two years later when J. L. Lewis, farmer and hardware dealer, built the first sweet potato storage house.

From that small beginning, the industry has grown until Tabor City itself has eleven curing and storage houses with a total capacity of 530,500 bushels. In the area are other houses which increase the total by at least one third.

Into these houses pour the cream of the sweet potato crop during each day of the sweet potato harvesting season. There they are graded, cured and prepared for marketing.

Within the past year, two dehydration plants were installed by the Garrell Sales Company, owned and operated by B. A. Garrell. This has opened up an entirely new field for the growers because it is the culls and non-standard types which are dehydrated for feed purposes. As the market levels off from wartime standards, dehydration is expected to play an increasingly larger part in the economy of the industry. With the return of a buyer's market, it appears likely that the higher quality potatoes may bring even better prices and the non-standards will find a lower price level. If this is true, the sweet potato may be turned into feed to the profit of both growers and feed buyers.

While no need for increased curing and storage space is indicated at present, one or more modern houses to replace buildings that have become obsolete will be erected in Tabor City during the next two

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Corbett Brothers

Predict GREAT FUTURE *for* YAM INDUSTRY

THE future of the "Yam" Industry is greater than any other crop grown in the South. This is exceptionally true of the Carolinas.

We have the soil, the farmers, the railroad and truck facilities for prompt delivery to the markets. Approximately 75 per cent of the total population of the United States lies east of the Mississippi River, or you might say, at our front door.

When the Corbett Brothers began introducing "Yams" and opening new markets, they found city after city where "Yams" were practically unknown and they were not sold in the various stores. By hard work, and quite often at a heavy loss to us, we converted the trade and buying public to preferring our "Yams." We believe, however, that we have only scratched the surface. Our program calls for more and more work; for greater and greater consumption.

The per capita consumption of *Irish Potatoes* in the United States is 122 lbs. per person. The per capita consumption of *Sweet Potatoes* in the United Staes is 22 lbs. per person. Actually, in the heavily populated states of the North, the per capita sonsumption is 5 lbs. per person. We are convinced that we can raise the average per capita consumption in the Northern States from 500 to 1000 per cent. The Corbett Brothers, or its predecessors, and the writer, have spent years of work and many thousands of dollars investigating the future of the *Sweet Potato* Industry. We have seen it rise from approximately 100 cars and trucks in 1932, when the potatoes were shipped out in one or two months, to approximately 2,500 cars and trucks in 1939 and 1940. Our business has grown wherein "Yams" were shipped only three or four months in the year to twelve months in the year. Our business has grown from three or four markets to practically every market in the East and Southeast and markets as far West as Colorado and California.

However, other competing states are not sitting idly by. They, too, are studying and planning for the future. To grow as we should, we must produce more potatoes to the acre; we must produce better quality; we must produce a potato that will carry to every corner of the United States. Our tests have shown us that this is practical. In fact, in one of our tests, we took "Yams" that were dug in October out of our curing house, hauled them fifty miles, put them in another building and kept them seven months additional, or a total of 15 months. The potatoes were sound and in good condition at the end of fifteen months. In other words, we cannot take the potatoes that we are now growing and take only a few of the very best potatoes and then put the remainder, or approximately seventy-five per cent in feed, as advocated by some, which will have only a very small salvage value, if any. We must improve our potatoes to the point where we can take a bigger percentage of the crop and still have potatoes that will be outstanding and meet the demands of the consumers.

We are satisfied that the farmers should increase their yields by fifty per cent. We are satisfied that the farmers can and should increase the percentage of their numer-one potatoes by fifty per cent also, in sodoing, have a better potato in appearance, color, vitamin content and carrying qualities.

In other words, we need more people who are interested in the "Yam" Industry and its future than they are in publicity or taking all of the profits possible and putting nothing back in return. We need more people who have the vision, the willingness to study, to plan and work for the future rather than a day-by-day profit viewpoint.

A LITTLE BORON Boosts Sweet Potato Yields

By A. B. BRYAN
Clemson Agricultural College
Clemson, S. C.

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BETTER CROPS WITH
PLANT FOOD MAGAZINE

RECENT tests in the use of boron in fertilizers for sweet potatoes by the South Carolina Experiment Station have led to two conclusions of consequence.

First, sweet potatoes need boron in small quantities for satisfactory growth.

Second, sweet potatoes will tolerate only a small amount of boron and even a small excess of boron is injurious to the sweet potato plant and yields.

The South Carolina boron experiments, conducted at the Edisto branch of the State Experiment Station by Dr. C. J. Nusbaum, associate plant pathologist, were undertaken because of the general recognition of the economic importance of boron in fertilizer practice in connection with plant nutrition.

A summary of the tests by Dr. Nusbaum in 1944 shows that all possible combinations of three levels of lime (none, 1,500 pounds, and 3,000 pounds of dolomitic limestone broadcast per acre), three of potash (1,000 pounds each of 3-9-0, 3-9-6, and 3-9-12 per acre) and five of boron (none, 5, 10, 20, and 30 pounds of borax per acre) were compared and various interactions analyzed. The Porto Rico sweet potato was used, and the experiment comprised triplicate systematically arranged plots on a deep phase of intertile Norfolk sandy loam soil.

Throughout the growing season, frequent examination of foliage was was made in order to detect symptoms of either injury or deficiency, and vine growth was measured twice.

At harvest, the yields of the various grades of sweet potatoes from each plot were recorded. These data have been summarized and statistical analysis is in progress. The sweet potatoes harvested from each plot are being kept separately in storage for further study.

Best Yields from Least Boron

Results at harvest time showed that best yields of sweet potatoes were from small quantities of boron in the fertilizer, five pounds of borax per acre. For such an increment of boron there was an increased yield of 40 to 70 per cent above the yield from the no-borax plots in the test.

It is especially noteworthy and significant that as the amount was increased to 10, 20, and 30 pounds per acre, however, yields dropped sharply, the decrease being in proportion to the amount of borax applied. In general, yields from the 20 and 30-pound applications were about the same or slightly lower than those from the no-borax plots. and the yields from 10-pound applications were intermediate between those from no-borax and five pounds per acre.

The simple table below shows the trend of yields of marketable potatoes from the unlimed, high-potash plots with varying amounts of boron.

Borax per acre	*Yield per acre*
None	153 bu.
5 lbs.	253 "
10 "	186 "
20 "	158 "
30 "	133 "

Signs of Injury

As the growing season advanced, definite signs of injury were recognized on plants which had received borax at the rate of 10 or more pounds per acre. This injury was characterized at first by a bronze discoloration of the leaf areas between the veins and later by burning of the leaf margins. The symptoms usually appeared on the older leaves about four or five weeks after planting. In severe cases, the affected leaves were soon shed, leaving the stems near the crown of the plant exposed. Some of these naked stems showed evidence of slight sunburn. On injured plants, vine elongation was somewhat restricted although the tips of the vines appeared to be healthy.

Injury symptoms reached their peak about seven weeks after planting. Later on, however, most injured plants showed evidence of recovery and accelerated vine growth. Some plots, which received 10 and 20-pound applications of borax, showed severe injury in August. However, by harvest time, practically all signs of injury had disappeared. None of the plants on plots receiving no borax or the five pounds per acre showed any evidence of injury throughout the season.

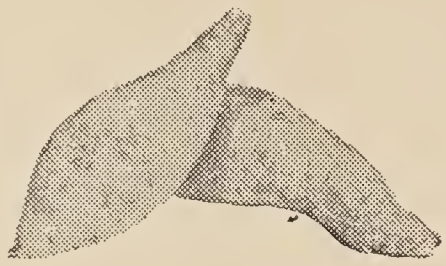
Leaf and vine symptoms believed to be associated with boron deficiency were not definitely detected until the latter part of August, when they appeared on some of the no-borax plots. By mid-October, however, the deficiency symptoms were quite pronounced on all of the no-borax plots and continued to be absent on plots supplied with borax. At first, terminal elongation of the vines was restricted and the internodes became shortened; then the petioles became curled and twisted. In advanced cases, the growing tips of the vines were stunted and distorted. Death of terminal buds and cessation of vine growth were observed late in the season. In October, the boron-deficient plants generally showed a rapid decline in growth. The older leaves became yellow in color and shed from the vines.

Dr. Nusbaum reports that in a few individual sweet potatoes taken from plants with above-ground symptoms of boron deficiency there were signs of internal breakdown. These necrotic areas in the potatoes were brown in color and irregular in size and shape, and he thinks the condition is associated with boron deficiency but has no confirmation on this point.

Caution Needed

While little is yet known about the boron content of sweet potato soils, undoubtedly many soils contain a supply not adequate to meet the plant nutrition needs of the sweet potato, Dr. Nusbaum concludes. But he advises extreme caution to avoid injury from too much boron.

"A recommendation of five pounds of borax per acre seems justifiable," he advises. "Theoretically, this amount is great enough to correct most cases of deficiency, and is not great enough to introduce risk of injury. In order to insure even distribution of the borax it should be thoroughly mixed with the complete fertilizer. If 1,000 pounds of fertilizer are used per acre, a mixture containing 10 pounds of borax per ton would suffice."



« « « NO

. . . is the time to JOIN THE CAROLIN

Membership Obligations

Membership in the Council does not place anyone under *LEGAL* obligation, although morally it is expected that growers agree to use the best possible practices recommended by the Council to assure quality production; dealers are expected to attractively package so that a solid reputation will be established on Northern markets for Carolina-produced potatoes; and agricultural agents are expected to lend their efforts in promoting the general welfare of the industry and this Council.

Executive Board

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Member and Chairman Auditing Committee, Lynchburg, S. C.

T. G. GIBSON
Member and Chairman Nominating Committee, Gibson, N. C.

SPECIFIC PURPOSES FOR WH

1. **To encourage the expansion of the Commercial Sweet Potato acreage in suitable areas.**
2. **To promote the use of improved practices in planting, cultivating, harvesting, storing and curing in order to assure a more uniform high quality product for market.**
3. **To encourage producers in stategic areas in specialized seed and plant production, thus assuring a dependable supply of high quality planting stock and to support these specialized seed producers by using and recommending the use of their production.**
4. **Develop new market outlets through advertising and other media.**
5. **Develop the processing of Sweet Potatoes for human and livestock consumption and industrial uses to assure**

Starting Point
THE CAROLINAS SWEET POTATO COUNCIL

ORGANIZATION + T

"A Straight Line Is the Shorte

DEALER

Andrews & Knowles ..... **Mt. Olive, N. C.**
Chadbourn Potato Storage ... **Chadbourn, N. C.**
Troy H. Cribb & Son ..... **Spartanburg, S. C.**
E. W. Fonvielle & Son ..... **Tabor City, N. C.**
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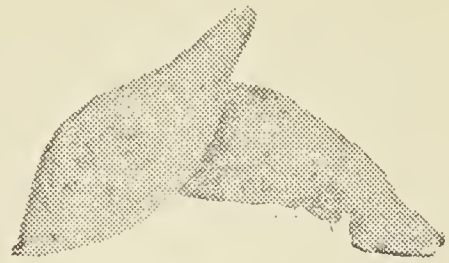
For additional information regarding Council, write: The Se

The Carolinas SWEET

PROMOTING THE WELFARE OF THE SWEET POT

W » » »



AS SWEET POTATO COUNCIL . . .

CH THE COUNCIL OPERATES

utilization of the entire crop and to divert a part of the production away from fresh market outlets.

6. **To keep members informed through regular newsletters as to crop conditions, market situations and other pertinent information.**
7. **To encourage needed research.**
8. **To represent the united industry in all handling with the U. S. D. A. and other Governmental agencies.**
9. **Sponsor legislation for development and protection of the industry.**
10. **To improve grading, sorting and packing methods on the farm and at loading stations.**

AMWORK = SUCCESS

Distance Between Two Points"

The Objective

BETTER SWEET POTATO INDUSTRY

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Southern Produce Distributors ... Faison, N. C.
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U. S. Rubber Company ..... New York, N. Y.

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POTATO Council, Inc.

TO INDUSTRY IN NORTH AND SOUTH CAROLINA

Membership Advantages

By being a member you are aiding in developing a crop that holds outstanding promise of becoming a MAJOR CASH CROP of this section. Each member will receive *The Sweet Potato Journal* and *The Carolina Farmer* for the Council Year. *The Sweet Potato Journal* is a national monthly magazine devoted entirely to Sweet Potatoes. *The Carolina Farmer* is a local farm magazine, a section of which will be devoted to THE CAROLINAS SWEET POTATO COUNCIL, through which members will be kept informed.

(Cut out and mail this coupon or consult your dealer.)

APPLICATION *for* MEMBERSHIP

Mr. Ed. H. Jones, Treasurer
The Carolinas Sweet Potato Council
Lake City, South Carolina

I desire to join the Carolinas Sweet Potato Council, as a (*Check one*):

..... Grower	$2.00
..... Agricultural Agent	2.00
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I attach hereto my membership dues in the amount indicated above.

Please mail acknowledgment and membership card to:

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..... (City) (State)

PROPER CURING MEANS QUALITY YAMS

(Continued from Page 15)

toxic or poisonous sap from the dead vines down into the roots. Obviously, when such damage occurs, it is caused by the chilling of the sweet potatoes in the cold soil, and, furthermore, it may be avoided to some extent by prompt harvesting and immediate curing.

There are two important conditions which must be considered for proper curing. They are (1) temperature, and (2) relative humidity (moisture in the air). Curing takes place most rapidly at a temperature of approximately 85 degrees (F). Wound healing is very slow below 70 degrees and practically stops at 60 degrees. The relative humidity should be at about 90 per cent for best results. Newly-harvested sweet potatoes give off considerable moisture and the problem is usually not that of maintaining sufficient moisture but of providing adequate ventilation, so that moisture does not collect on the potatoes or in the storage room.

Cure at 80 Degrees

It is important to place the sweet potatoes in the house as soon as possible after they are dug and that the temperature of the house be at about 85 degree (F) while the house is being filled. This is especially true if the crop is being harvested in cold or wet weather. The temperature should be checked frequently with a good thermometer. If the temperature goes above 90 degrees the room should be cooled off by opening the ventilators and, if the temperature drops below 80 degrees or if a cold spell is forecast, additional heat should be provided. The humidity will probably be suitable if careful attention is paid to ventilation. If the walls or containers begin to sweat, the ventilators should be opened to allow this excess moisture to escape. As long as the house is dry, the ventilators may be kept closed.

Sweet potatoes, like Irish potatoes, apples and other fleshy fruits and vegetables, remain alive after they have been detached from the plant. This means that they carry on physiological processes during storage. The conditions prescribed for proper curing are designed to give the crop a good start toward the maintenance of the health and vitality of these living tissues throughout the storage period. This may be accomplished easily where sweet potatoes are harvested during warm, dry weather and where temperatures are high enough during the first week or two of storage to provide for natural curing. However, in some parts of the sweet potato belt, late planting or unfavorable growing conditions may delay the development of the crop so that the growing must delay harvest as long as possible in order to obtain a satisfactory yield. If it becomes necessary to delay harvest until the advent of freezing weather, adequate provision should be made to harvest the crop speedily and to cure it in the prescribed manner with artificial heat.

BUCKEYE RITE-HEAT

OIL-BURNING TOBACCO CURING SYSTEMS

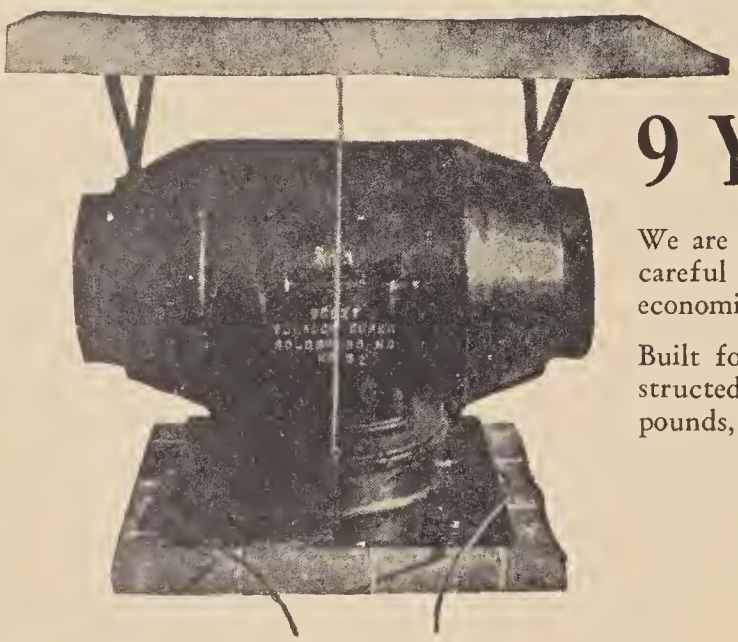
● *Four Stoves* ● *No Flues* ● *Positive, Accurate Heat When and Where Needed*

CAN'T BE BEAT FOR CURING POTATOES IN TOBACCO BARNS

For Sale by

JOHNSON COTTON COMPANY

Limited Supplies DUNN, N. C. *Act Now*



Scott Tobacco Curer

9 Years of Proven Success

We are entering our ninth year of progress in curing tobacco. With our careful designing, it has proven to be one of the best, as well as the most economical, gravity feed, surface type oil burners on the market.

Built for years of service, we have a new improvised design. It is constructed of heavy cast iron 3/8" thick, weighing approximately 315 pounds, and absolutely fire-proof.

We still have some territory open for dealers.

Write—Wire—or Phone to

SCOTT MFG. CO.

GOLDSBORO, N. C.

TABOR CITY

(Continued from Page 16)

years. Additional facilities may be required by all of area buyers, among whom are E. W. Fonvielle & Son, W. A. Corbett, M. C. Sarvis Company, B. A. Garrell, Chadbourn Storage Company and Mrs. M. M. Stephens and Sons.

Development of the sweet potato industry in the Tabor City area has been attributed in part to the hand of nature which blessed the section with a type of soil most suitable for growing the vegetable. With the proper seed and correct methods of cultivation, soil in the Tabor City area yields a smooth, attractive potato with a highly palatable favor. In smoothness and flavor, it is unexcelled anywhere.

However, Tabor City's growth as a center of the industry has been due to several additional factors, among which are improved quality of seed, growing of vine potatoes rather than sprout potatoes, better care in handling and improvement in marketing methods.

The war-time market, which reduced the premium on quality, delayed many of the changes that appear vital. The margin of price between the potato that is grown from the sprout and the one that is produced by setting out the vine is certain to widen in the years to come. However, the Tabor City area is getting ready for this inevitability and both growers and buyers have inaugurated a movement with a three-point objective: 1, certified seed; 2, disease treated seed, and 3, vine potatoes.

With more than a million bushels indicated for 1947 and with the sweet potato taking its place alongside tobacco in the rich farmlands of the border area, dealers are now concerned with expanding their northern markets. How soon a more comprehensive advertising campaign may be inaugurated, local dealers would not venture a guess. But a follow-up to the publicity given by the agricultural division of the Atlantic Coast Line Railroad Company will receive the support of the industry in Tabor City.

Sweet potatoes are rich in energy producing carbohydrates, calories and many of the minerals, and these facts may be the key to open wider the door to the greater markets.

Let us quote you a price before buying your memorial work.

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EL MORO

A Good Cigar

SPECIALIZING *in* KILN-DRIED NORTH CAROLINA YAMS

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we urge all growers
to join the Council
and help build
A Better Sweet Potato Crop

CHADBOURN POTATO STORAGE COMPANY, Inc.

CHADBOURN, N. C.

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VERNON E. RAMSEY

SUFFOLK, VIRGINIA
Phone L. D. 4

TAMPA, FLORIDA
M-6891

Carolina Sweet Potato Council

WHY?

(Continued from Page 9)

Carolina deal is in a most favorable position. First the crop is ideally suited to a large part of our soils and to our farmers. Secondly, we occupy a most favorable geographic position being much nearer to the large population centers than competing states and thus enjoy a lower freight rate than ours. Thirdly, our territory has not as yet become infested with the sweet potato weevil.

The purpose of the Council as set forth in our Articles of Incorporation may be briefly summarized by saying the Council proposes to coordinate the efforts of the work now being done, to furnish a channel for the passage of information, to work to establish quality in our commercial production, and though never acting as a sales organization, to promote and develop new markets and new market outlets. These high ideals and purposes should permit the support of all agencies, firms and individuals interested in the deal. The purposes in detail are:

1. To encourage the expansion of the Commercial sweet potato acreage in suitable areas.
2. To promote the use of improved practices in planting, cultivating, harvesting, storing and curing in order to assure a more uniform high quality product for market.
3. To encourage producers in stragetic areas in specialized seed and plant production, thus assuring dependable supply of high quality planting stock and to support these specialized seed producers by using and recommending the use of their production.
4. Develop new market outlets through advertising and other media.
5. Develop the processing of sweet potatoes for human and livestock consumption and industrial uses to assure utilization of the entire crop and to divert a part of the production away from fresh market outlets.
6. To keep members informed through regular newsletters as to crop conditions, market situations and other pertinent information.
7. To encourage needed research.
8. To represent the united indrustry in all handling with the U. S. D. A. and other Governmental agencies.
9. Sponsor legislation for development and protection of the industry.
10. To improve grading, sorting and packing methods on the farm and at loading stations.

Davidson County Looks To Sweet Potato Future

(Continued from Page 11)

the county are stored in bins in houses built for curing potatoes. To properly cure potatoes to reduce injury and rots, they should be stored in crates or baskets in the curing house. Several farmers are now curing this way and more have said they plan to store and cure their potatoes in baskets or crates at digging time in 1947.

The process of curing begins immediately when the potatoes are put into the curing house. The temperature of the curing house should be maintained at 80-85 degrees F. for the two to three weeks curing period. After the potatoes are cured the temperature is maintained at 50 degrees F. for the remainder of the storage period.

Demonstrations conducted by the County Agents in 1946 using the most up-to-date spacing, row width, fertilization and curtural practices, yielded results of an average of 401.6 bushels per acre. Of this yield, 312.6 bushels of No. 1 marketable potatoes were produced per acre. Mr. L. M. Craver, of Clemmons, Route 2, produced a yield of 150 bushels of potatoes on three-tenths of an acre or a yield of 500 bushels per acre.

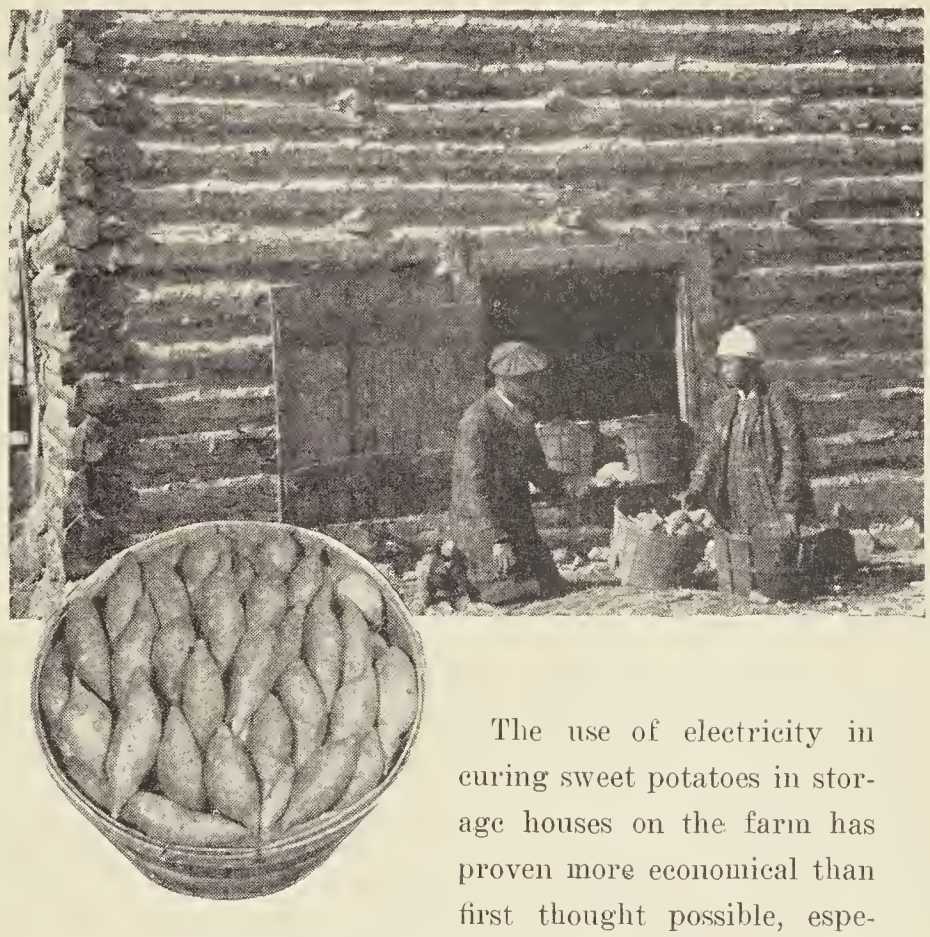
Plan New Dehydration Plant

Through continuous use of the latest cultural practices, we in Davidson County hope to increase the yield per acre of sweet potatoes. More farmers are planning to store their potatoes in baskets or crates. thereby decreasing the rots and bruises on potatoes. With increased production and quality of potatoes and a readily available green and cured local market, along with a dehydration plant located in the county, farmers should have no troube marketing their potatoes. It is hoped that the market and dehydration plant can be made available by the time the 1947 erop is harvested.

Sweet potatoes are becoming more and more popular in the daily diet of housewives and with their increased use and other by-products that are being made from sweet potatoes, thc outlook for the future is very bright.

Farmers have indicated their **desire** for improved health conditions for the past several years. Over one-third of the Resolutions presented at the 1946 State Grange Convention were pertaining to health and in support of the program of the Medical Care Commission.

Cure Sweet Potatoes *Electrically!*



The use of electricity in curing sweet potatoes in storage houses on the farm has proven more economical than first thought possible, especially if the storage house is well insulated. The automatic feature of electrical heating is of great value to the farmer — eliminating the uncertainty of uneven heating and greatly reducing the risk of fire. The installation of electrical equipment is not expensive and requires very little room — much more uniform heating is possible.

For further information on this better method of curing your sweet potatoes, write to Agricultural Development Department, Carolina Power & Light Company, Raleigh, N. C. There is no obligation on your part, of course.

Ask also about strong, healthy and *early* sweet potato plants from electric hot beds.

CAROLINA POWER & LIGHT COMPANY

CORBETT

Leaders in the "Yam" . . .

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The World's Largest Cash Buyers of Porto Rican 'Yams'

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FIRST in the U.S.A. to do the following:

FIRST Cash Buyers of "YAMS • FIRST to Copyright Labels • FIRST to Sell "YAMS" and Label Them as Such • FIRST to Clean Potatoes for Discriminate Buyers • FIRST to Introduce "YAMS" to New Markets—Both Large and Small • FIRST to Run Tests for Fertilizer and Other Chemical Tests for Satisfactory Results • FIRST to Start Improving the Seed Stock • FIRST to Introduce the Waxing of "YAMS" • FIRST to Design Brushing Machines for Cleaning "YAMS" • FIRST to Design the Machinery for Waxing "YAMS" FIRST to Develop a Satisfactory System for Curing "YAMS" • FIRST to Use Paper Bags for Protection Against Cold When Shipping.

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We Expect To Continue Being

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Storage Capacity: ONE MILLION BUSHELS

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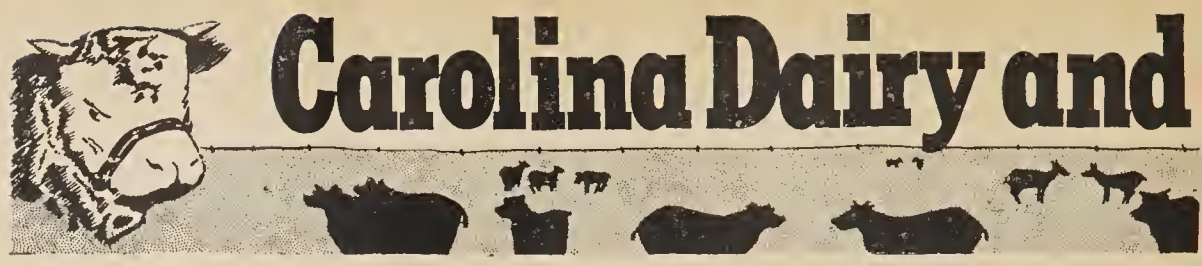
FIRST to Install Central Packhouses for Grading and Packing "YAMS" • FIRST to Introduce and Exhibit Growing and Consultation Office with Experts • FIRST to Work Out a Five- to Ten-Year Production Program • FIRST to Forecast the Growing and Selling of 10,000 Cars Yearly, Within the Next Five Years, of "YAMS" • FIRST to Ship "YAMS" from the Carolinas to California in Cars • FIRST to Convince the Banks that "YAMS" Are a Good Credit Risk • FIRST to Ship "YAMS" Fifty-two Weeks in a Year • FIRST to Spend Thousands of Dollars of Our Own Money and to Set Up a Program for the Improvement of the "YAM" Industry, Running Test After Test of Soil, Seed, Storing, Curing and Shipping.

Leaders in the Yam Industry

LABELS
TWO STATE
CAPE FEAR
(Commercial)



BUILDINGS AND EQUIPMENT FOR BEEF CATTLE

WITH the great increase in beef cattle numbers in eastern North Carolina it is of vital importance to give careful thought and planning to providing the proper buildings and equipment for them. One of the advantages of beef cattle is that their requirements for buildings and equipment is relatively low. This does not mean, however, that these requirements can be ignored.

Shelters for beef cattle need not be expensive. Open sheds facing to the east or south are the most practical. Of course, if one has high priced purebreds and wishes elaborate buildings partially for advertisement and show, they can be built, but they are not necessary, especially in your mild climate. Tight barns should not be used. Special forethought and planning should be given to location of barns and lots with reference to convenience of water, pastures, feed barns and management.

Regardless of the type of shelter used, it should be on well drained ground, deep enough to cut down draftiness and large enough to provide room for the cattle. Breeding cows should have about sixty square feet of floor space. Two-year-old heifers, yearlings and weaned calves will need proportionately less barn space. Cattle being fattened for market will need less space than breeding cows.

Ninety to one hundred square feet of yard and shelter is about right for a two-year-old steer and at least one-fourth of this should be under shelter. As a rule, shelters should be provided with gutters to keep the lots from becoming excessively muddy. In many cases it may be advisable to pave the feed lots to keep the cattle out of the mud and enable pigs following them to recover a maximum of the grain. From $2\frac{1}{2}$ to 3 linear feet of trough space is required for each mature animal. Yearlings take about two-thirds as much rack and trough space as older cattle, and weaned calves about half as much space. Horned cattle, especially two years old or older, require at least a half more trough and rack space than dehorned or polled cattle.

Be sure to make provisions, within the barns and in the lots, for dividing the herd into groups according to age, sex and condition. This will make possible more efficient and economical feeding and management.

The feed bunks or troughs should be of good two-inch material and built from 30 to 36 inches wide. The sides should be 6 to 10 inches deep and the legs of 4x4-inch material, well braced and bolted to the body. For mature cattle the floor of the bunks or troughs should be 20 inches from the ground. It is advisable for these floors to be adjustable to accommodate cattle of various ages as well as provide for manure accumulation.

A dipping vat is worthwhile equipment for the beef cattle farm. It should be so located with reference to lots as to facilitate ease and convenience in handling the cattle at dipping time. Directions for the specifications and construction of dipping vats can be obtained through your county Farm Agent.

Water troughs are essential equipment around any cattle barn and should provide an adequate supply of good fresh water at all times.

Pasture and barn lot fences are indispensable for efficient management. They should be durable and strong, and high enough to hold even the wildest of the herd. Remember, it is much easier to prevent cattle from getting out than it is to keep them in once they get started to getting out. The farm should be so fenced as to permit grazing all pastures and gleaning all feed crop fields.

Adequate but economical buildings and equipment will go a long way towards making the beef herd profitable and also a pleasure to manage.

EDITOR'S NOTE — This is the first of a series of articles on livestock sponsored by Lancaster's Stockyards, Rocky Mount, N. C.

BUILDINGS AND EQUIPMENT FOR HOGS

With the approaching spring farrowing season not far away it is now timely to give some thought and planning to providing the proper buildings and equipment for hogs.

Buildings for hogs need not be expensive but they should be adequate to properly house and care for the animals. The houses for this season, especially for the spring farrowing, should be warmer and better bedded than for other seasons. A little extra care in providing protection from the cold and dampness will pay big dividends in more and healthier pigs saved.

Special forethought and planning should be given to location of barns, houses and lots with reference to convenience of water, pastures, shades, feed barns and management. Regardless of the type of shelter used it should be on well drained ground, so constructed as to cut down draftiness and large enough to provide room for the hogs.

Either portable individual farrowing houses or a central farrowing house, which provides for a number of sows un-

LANCASTER'S STOCKYARDS

ROCKY MOUNT, N. C.

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"Where Old Customers Stick and New Customers Become Regulars"

Always sufficient buyers to handle to the best advantage an unlimited number of both cattle and hogs. . . . Buyers know they can fill their needs on our sale.

J. T. WOOTEN, *Manager*

Livestock Section...

der the same roof, may be used. We prefer the former because it is cheaper, for where a central farrowing house is used, another shelter must be provided when the sow and litter are moved to the field. The portable house also has the advantage from a sanitation and parasite standpoint, since it can be moved to clean pastures as frequently as desired. Sweaty walls or damp floors are objectionable and pig losses are often traceable to such conditions. Direct sunlight at some time of the day should be allowed to strike as much of the interior of the house as possible. Sunlight destroys germs and tends to promote warmth and dryness, besides invigorating the pigs.

The water supply, feed bins, sewer drainage in case of central houses, suitable troughs and other equipment and interior arrangements should be provided so as to lessen the amount of work in caring for the hogs. Many old buildings may be made efficient for hog raising by simply remodeling along suitable lines.

Where portable farrowing houses are used, one house for each sow should be provided. They should also have one trough for drinking water and one for feed. One self-feeder may be used for two or more sows. Pig creeps, where little pigs may be fed away from their dams, feeding floors to keep the hogs out of the mud and to save feed, and sun shades where natural shade is not available are worthwhile equipment.

The portable farrowing houses should be at least six by eight feet, with board floors and guard rails on each side. The guard rails are good investment in any type of farrowing house. They prevent the pigs from being crushed against the side of the pen when the sow lies down. The rail should be about nine inches from the floor, providing a space between it and the side of the pen so that a little pig may get out if caught under the rail when the sow lies down.

No special type or kind of building is necessary for housing breed sows or fattening hogs, but any building used for this purpose must be dry and well ventilated; all buildings should have a southern or eastern exposure and protection from northern winds by woods or hedges is desirable.

Your county agent or agricultural teacher can furnish you with N. C. State College building plans or Farmers' Bulletin No. 1487 can be obtained from the U. S. Department of Agriculture, Washington, D. C.

Remember, proper housing is an important factor in the successful raising of hogs. Too often this is neglected, when little expense and effort would be required to provide good, serviceable, well-ventilated houses which give ample protection from cold and admit much-needed sunshine.

CARE OF THE HERD BOAR

The care of the herd boar is of utmost importance, for he is really half the herd. The breeding season for next fall's pig crop is only a few months off now, and the way in which the herd boar is cared for between now and then will have a great influence on the results obtained.

Let us assume that you have a good boar, for there is no greater false economy than the purchasing of an inferior one. However, in a later article we hope to give you some valuable information on the selection of boars.

Feeding

The boar should be well fed but not fattened, for his development should be with regard to growth, vigor and soundness. In addition to proper amounts of carbohydrates and fats in the feed, protein of the right quality, minerals for sound bones and vitamins should be provided.

Good winter pasture is excellent for the herd boar. In addition to being a source of a large amount of the necessary nutrients, it provides a means of exercise and sunlight, and is the best insurance against any lack of vitamins.

A satisfactory concentrate mixture for developing boars from about 100 pounds

Over 200 Head of
Registered Guernsey Cattle
MAXIM-FOREMOST BLOOD LINES
Bull Calves Out of High Record A. R. Dams FOR SALE
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We carry on hand at all times a good selection of high qualified Mules and Horses for private sale any day of the week.
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up to maturity consists of: corn, barley or wheat, 40 lbs.; ground oats, 30 lbs.; standard middlings, 20 lbs.; cottonseed meal, soybean oil meal or peanut oil meal, 5 lbs.; and fish meal or tankage, 5 lbs. A good mineral mixture like we gave you on October 15 should always be available to the animals. After the boar reaches breeding age he will not need to be fed heavily, except during the breeding season. Just enough concentrates, in addition to the pasture, to keep him growing and in a good strong thrifty condition is all that is necessary. One pound of concentrates daily per 100 pounds live weight is about sufficient for fairly mature boars on good pasture.

About two weeks before the breeding season starts, the ration should be increased so he will be gaining in weight when service begins. The amount to feed then will depend on how much he is to be used and on his stage of maturity, so as to prevent his losing much weight. At this time the ration should contain a higher proportion of protein supplement, such as wheat middlings or bran, one of the oil meals, and fish meal or tankage. When pasture is not available, good quality soybean, lespedeza, alfalfa or clover hay should be provided in a rack. Clean fresh water and a good mineral mixture should always be available, but special tonics or drugs are not necessary if a well-balanced ration is provided.

CARE OF BEEF COWS AT CALVING

The spring calving season is just beginning in eastern North Carolina and will soon be underway in the rest of the state, so it is timely that we give consideration to this vital subject. The approaching calving period is the most critical period in the life of the cow or calf, and will determine to a large extent whether the enterprise is to show a profit or a loss.

Most of the calving troubles can be avoided by having the cows in a good, strong, thrifty condition before calving. I don't mean that they should be overfat, but they should be in good condition so as to have a reserve to carry them over the critical period of calving and the nursing period. The cows that are soon to calve should be protected from injury, sudden shock and over-exertion, but they should be allowed exercise. To insure this it is often necessary to divide the group of cows according to age, condition, and time of calving.

If the weather is favorable, there is no better place for a cow to calve than out on clean, dry pasture, but if it is not, be sure that the calving quarters are clean, dry, and well-bedded. Avoid feeding dusty, moldy feeds to cows that are soon to calve or to those nursing young calves.

Care of the New-Born Calf

If the above precautions are taken, usually the calf will not need any care other than to be left alone with his mother. If, however, difficulties do arise at calving which the layman cannot take care of, then call a competent veterinarian. In either case, the calf should receive its mother's first milk, called colostrum, for it acts as a mild purgative, has antiseptic value, and is very rich in the necessary vitamins.

Beef calves are usually left with their mothers which, if properly cared for, will raise most normal calves without extra assistance. The first day after calving, the cow should be fed only good quality hay or pasture and given access to fresh water. Then she may be gradually put on a grain feed, the amount depending on the quality or roughage available, the condition of the cow, how well she is milking, and the method of handling. Cows on good pasture should not need any grain.

Saving the calf at birth is only part of the operation. Special care should then be made to guard him against disease and injury and grow him out properly until weaned. Remember, the percentage calf crop weaned is usually the most important item in determining the cost of calves at weaning. Our feed supplies have been restricted, which may mean that our cows are not in as good condition as in normal times.

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AGE Male	AGE Female	Monthly Income	AGE Male	AGE Female	Monthly Income
35	40	$3.02	58	63	$5.03
40	45	3.29	59	64	5.18
45	50	3.63	60	65	5.33
50	55	4.06	61	66	5.50
51	56	4.16	62	67	5.69
52	57	4.27	63	68	5.87
53	58	4.38	64	69	6.07
54	59	4.49	65	70	6.28
55	60	4.62	70	75	7.55
56	61	4.74	75	80	9.27
57	62	4.88	80	85	11.64

Other Age Quotations Upon Request

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U. S. Grades and Uses

(Continued from Page 11)

fying the grade he wishes to purchase, usually the U. S. No. 1 or the U. S. Extra No. 1. If the buyers, producers and shippers are familiar with the standards, buyers will know what kind of grade and paek to expect upon arrival at market, and shippers will know how to grade and pack to meet the requirements upon which the sale is made.

Chief Requirements Of U. S. Grades

U. S. No. 1

Sweet potatoes of one type, firm, fairly smooth, not badly misshapen, free from black rot, other deeay or wet breakdown, freezing injury, and free from damage caused by secondary rootlets, sprouts, euts, bruises and scars, growth eracks, seurf and other diseases, dirt or other foreign matter, weevils or other insects, mechanical or other means.

Size: Not less than 1¾ inches in diameter and shall not exceed 10 inches in length. Weight shall not exceed 24 ounces.

U. S. Extra No. 1

Sweet potatoes of similar varietal characteristics, firm, smooth, fairly clean, fairly well shaped, free from black rot, other decay or wet breakdown, and from damage caused by secondary rootlets, sprouts, cuts, scars and bruises, growth craeks, scurf, or other diseases, weevils or other insects, mechanical or other means.

Size: Not less than 1¾ inches in diameter; not over 10 inches length, and shall not weigh less than 4 ounces nor more than 20 ounces.

Tolerances

Tolerance for defects — Not more than 10% by weight may fail to meet the requirements of this grade, but not more than 5% of this amount shall be allowed for serious damage including not more than 2% for soft rot or wet breakdown.

Tolerance for size—Not more than 10% by weight may not meet the specified size requirements, but not more than half of this amount or 5% shall be allowed for sweet potatoes smaller than the minimum diameter and weight speeified.

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The promotion of goodwill through the sale of quality goods with better service.
OUR AIM IN FARMING . . .
Better crops through improved fertilization and better farm practices.
1865 • 1947

How Sweet Potatoes Move To Market

(Continued from Page 14)

tions the volume of sales often is small.

The relative importance of the various types of buyers as they serve growers in North Carolina is shown in Table 1. In the principal commercial areas—Columbus, Pamlico, Currituck, and Scotland counties—more than 90 per cent of the sales move through local buyers, wholesalers, and terminal-market dealers. In Currituck and Scotland counties, most of the sale are sold "green" to the consumers' markets, principally through the local agencies which account for over four fifths of these sales.

Table I. Proportion of Sweet Potatoes Sold to Specified Buyers in Selected Areas of North Carolina, as Reported by 179 Growers, 1945.

Types of Buyers	Columbus-Pamlico Per Cent	Currituck-Scotland Per Cent	Davidson Catawba Per Cent	Johnston Per Cent	All Areas Per Cent
Local buyer	2.8	9.9	14.2	0.3	11.2
Truck-hucksters	1.3	3.5	41.0	51.1	13.1
Stores-restaurants	—	0.4	12.6	12.3	3.5
Produce jobber	2.9	—	9.4	8.8	3.1
Consumers (direct)	0.6	—	0.7	0.5	0.3
Local wholesaler	40.6	49.3	—	—	34.4
Grower-shipper	3.7	—	—	—	0.9
Terminal-market dealer	37.8	34.7	18.1	23.4	31.3
Other	0.3	2.2	4.0	3.6	2.2
Total					
Per Cent	100.0	100.0	100.0	100.0	100.0
Number of bushels	45,099	93,625	42,059	6,843	187,626

In Davidson, Catawba, and Johnston counties—areas representatives of growers having small commercial acreages—most of the sales are made to trucker-hucksters. Here wide variation exists in sales through the different channels. The number of agencies in each class, however, is limited. This area is characterized by a high degree of industrialization, and a large proportion of the sales move directly to local consumers' markets in the surrounding territories.

The principal types of buyers in terms of volume of purchases are the local wholesalers and the terminal-market dealers. In 1945, for instance, they handled 34.4 per cent and 31.3 per cent of the total sales, respectively. Both of these outlets obtained sweet potatoes largely from the commercial areas in Eastern North Carolina.

Size of the Sweet Potato Enterprise

The association between acres of sweet potatoes grown per farmer and the channel through which sales are made is shown by data presented in Table 2. Small growers—those having from one to three acres—principally sell to the outlets which purchase in relatively small lots. These are the trucker-hucksters, local buyers, stores, and restaurants. The largest number sell to trucker-hucksters. Growers having three to ten acres show wide variation in the sales channels used. This group, however, tends to patronize the local wholesalers and the terminal markets. As would be expected, the large growers—those having over ten acres—sell to local wholesalers and terminal markets. In the territory studied, it may be noted that most of the growers in the eastern areas sell through local wholesalers and terminal markets. Those in the central and western areas to a large extent sell through trucker-hucksters and local outlets.

Table 2. Number of Growers Reporting Sweet Potato Sales to Specified Buyers by Sizes of Sweet Potato Acreage Groups, as Reported by 179 Growers in North Carolina, 1945.

Types of buyers	Sizes groups (in acres of sweet potatoes) 1.1-3 number	3.1-10 number	10.1 over number	Total 1 number
Local buyer	15	12	6	33
Trucker-hucksters	28	19	5	52
Stores-restaurants	15	8	1	24
Produce jobber	4	5	—	9
Consumers (direct)	3	2	—	5
Local wholesaler	13	19	17	49
Grower-shipper	1	3	—	4
Terminal-market dealer	1	5	8	14
Others	11	3	9	23
Total	91	76	46	213

* Since several growers sold to more than one agency, this total does not correspond with the number of growers reporting.

Summary and Conclusions

Four types of buyers—local wholesalers, terminal-market dealers, local buyers, and trucker-hucksters—are the most important outlets available to North Carolina farmers in the sale of sweet potatoes. Local wholesalers and terminal-market dealers were particularly important outlets for growers in the larger commercial areas in the eastern part of the State. In 1945, these dealers handled approximately two thirds of the sweet potatoes marketed in the production areas included in this study. Local buyers and local hucksters accounted for an additional one fourth of total sales. Truck-hucksters and terminal-market dealers predominated in the commercial areas of Western North Carolina (See Table 1).

It may be seen from these findings that producers usually have an opportunity to choose from among two or more outlets when they sell sweet potatoes. They are in a position, therefore, to select the outlet that offers the highest net price and renders the best services. Progressive growers are aware of the advantages

to be gained by assuming responsibility for carefully evaluating the services performed by buyers.

Buyers also will find it in their interest to give careful consideration to economies in handling sweet potatoes. This will become increasingly important as they adjust their operations in accordance with postwar trends in marketing. Indications are that these trends, as they apply to sweet potatoes, will include a return to a buyers' market where consumers will show more inclination to express preferences and to consider price-quality relationships. These trends also will be associated with significant developments in grading and packaging, and will afford greater premiums to those agencies who gear their operations for handling a quality product.

Early Chicks Lay Early Eggs

Midsummer days with long hours of daylight help a chick to grow faster, to mature, to become a laying pullet. The young pullet, growing more rapidly in the long days, lays her first egg in fewer days after she, herself, emerges from the egg. It is the early-hatched chick (from late February to early April) that is of an age and stage of development best able to take advantage of the long hours of June and July daylight. The result is earlier egg laying, both by the calendar and by the age of the young bird. There are two factors: (1) the pullet is hatched earlier and so would lay earlier by the calendar anyhow; and (2) she lays at an earlier age and advances further the calendar date of her first egg.

The U. S. Department of Agriculture has records from "genetically similar" pullets hatched at different periods of the year and extending over 9 years. These records show that the young chickens make best use of extra hours of sunlight when they are from 18 to 24 weeks old. Several thousand records show that pullets hatched in the week of April 18 or later averaged three weeks older at the time they laid their first eggs than did pullets hatched during the week of March 21. The earlier pullets had a start of four weeks on the later ones but gained an additional three weeks as the result of the more favorable daylight hours in the weeks just before they started to lay.

The Bureau of Animal Industry experimenters, who report these records, found that White Leghorns and the Rhode Island Red pullets responded similarly.

Earlier investigations have indicated the desirability of early hatching to promote early laying. The thorough testing of the theory in the Beltsville flock confirms the earlier studies, and emphasizes the part that long days play in maturing the young birds. The existence of the flocks which are genetically similar eliminates the variation due to heredity. Eggs from the same hens produce pullets that start laying at a younger age if hatched in March than will sister chicks that hatched in May.

Put Water Warmers In Poultry Houses

Some poultrymen in North Carolina are turning on electric lights early in the morning to lengthen the chicken's work day and increase egg laying, but they are not getting the results that they should.

When T. T. Brown, Extension poultry specialist at State Cllege, was asked about this situation, he said that the chief trouble was with the water supply.

"This first thing the hen does when

she is waked up by the lights early in the morning and comes off the roost is to eat a bit and take a drink of water," he explained. "If the drinking water is frozen over or too icy, she does not take her usual drink. Then, too, she does not begin eating mash right away and thus the value of the lights is lost."

And so, with these points in mind, Brown makes the following suggestions. First put in water warmers so as to take the chill off of the drinking water. The water warmers are essential equipment to use along with morning lights during the short, cold days of winter to get maximum egg production.

Once the hen has plenty of good water to drink, she will eat more mash and lay more eggs, according to Brown.

"What about these lights, anyway? Will they actually make the hens lay more eggs?" Brown was asked. "Not so many more total eggs during the year," he replied, "but certainly more eggs during the winter months, when egg prices are generally higher.

"The hen is a prima donna and just as temperamental as any Hollywood star. She doesn't like icy, cold water these mornings. If our poultrymen don't get more water warmers, there will be fewer eggs in the basket."

Starfish Meal for Growing Chickens

Starfish, though a serious pest in oyster beds, may be an asset to poultry growers. the U. S. Department of Agriculture concludes from a series of tests of starfish meal fed to young growing chickens. Shortages of protein feeds for livestock led Department research workers to experiment with several materials formerly discarded or poorly utilized by various industries. One was starfish, which oystermen take in quantity in cleaning oyster beds.

Whole starfish, when sundried and ground into meal, contain about 30 percent of protein, 19 percent of calcium, and smaller quantities of other nutrients including phosphorus. Tests of its suitability for poultry feeding showed that it compares favorably with sardine meal, familiar as an ingredient of poultry feeds. The tests were with White Leghorn and Rhode Island Red chicks fed diets adequate in all nutrients except those that the starfish and sardine meals were expected to supply.

Starfish meal proved a good source of protein, but it gave best results when fed in rather small quantities. Too large an amount supplies an excess of calcium. On the basis of these tests, the investigators advise poultrymen to limit this meal to 3.5 to 5 percent of the diet. Even this limited proportion supplies chicks with considerable protein and calcium enough for their needs.

The research workers conclude that production and use of starfish meal should be encouraged—especially during shortages of animal protein feeds.

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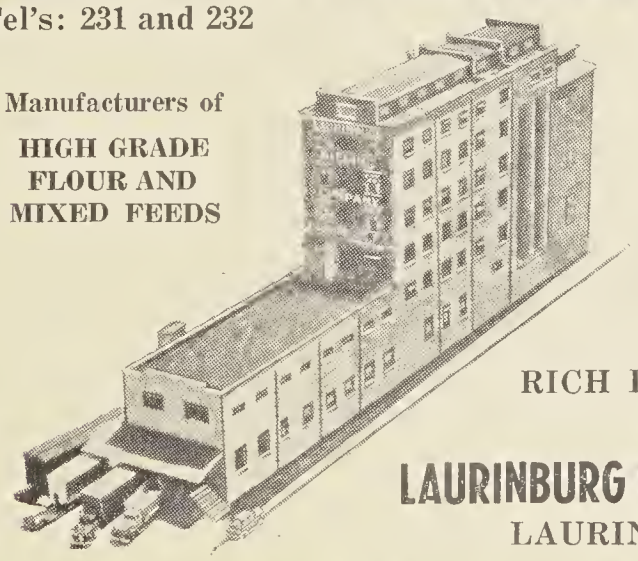

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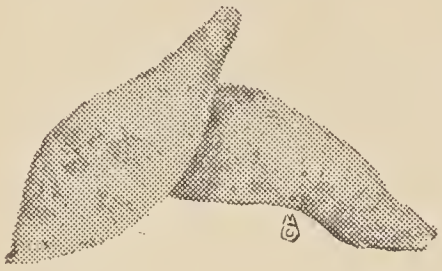

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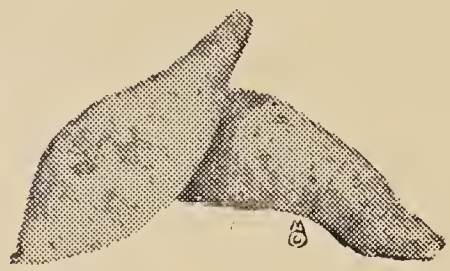

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Throughout the years, we have endeavored to make the GARRELL SALES COMPANY not only a leader in market prices, but our policy has aimed at an even higher goal —the development of the sweet potato industry as a whole.

To obtain this larger objective, we have cooperated constantly with the growers in procuring better seed, in furnishing all information obtainable on improved methods of production and handling, and in expanding the market for their crop.

Rest assured that the GARRELL SALES COMPANY will continue to promote the interests of the sweet potato growers . . .

IN THE PLANTING SEASON, *by offering every aid in obtaining proper seed and up-to-date information on the best methods for quality production . . .*

IN THE MARKETING SEASON, *by paying the highest prices possible.*

Garrell Sales Co.

Sweet Potato Buyers

TABOR CITY - - - - - - - NORTH CAROLINA

ACROSS THE EDITOR'S DESK

Good Seed

The honeymoon is over. This familiar saying which has been applied to many situations is true of the SWEET POTATO industry now. During the war period and the accompanying food scarcity, growers have been able to sell to dealers (and in turn dealers to the public) sweet potatoes of only common to poor quality; but the tide has turned and from now on we will be able to sell only potatoes of good to excellent quality. Those of us who persist in growing anything less will not find a ready market, and if we do we will be severely penalized in price. On the other hand, high quality sweet potatoes that will meet the competition of our neighboring areas and of other states will always be in demand and find a ready market.

SEED STOCK, GOOD SEED STOCK is the foundation for growing high quality potatoes. Thus it is very important that we pay particular attention to seed selection now, and formulate plans not only for this winter's crop, but for future crops.

The first seed selection should be done at harvest time and re-selection at bedding time, but if no selection has been previously done it is *doubly extra important* that very careful attention be given to this matter now, prior to bedding.

Careful attention to these simple rules will materially contribute towards your success in producing high quality market potatoes.

SOURCE OF SEED STOCK: Seed stock should come from potatoes produced from vine cuttings. Seed potatoes from vine cuttings are usually of higher quality and are less apt to be diseased.

SIZE OF SEED STOCK: Experiments have shown that while small potatoes or "strings" produce more plants per bushel, they are weaker plants than plants from larger potatoes and a larger percentage loss is experienced when they are set in the field. This in turn results in a lower yield. On the other hand, potatoes of number one size (1¾" to 3½" diameter) and larger produce strong vigorous plants and a resultant higher yield.

SELECT FOR OUTSIDE COLOR: The copper-skinned or unit one Porto Rico variety is the type demanded by the market. This strain and variety produces many mutations or potatoes that are off-color either in spots on the potato or the whole potato. Thus to continue producing potatoes of desirable market quality it is necessary to very carefully select seed for color each year. All potatoes that are lighter in color than the characteristic deep copper color should be discarded as seed. Even potatoes with white or lighter colored spots should be discarded, as plants pulled from these spots will produce light colored or white potatoes. Every potato planted should be carefully selected for outside color.

INTERIOR COLOR IS VERY IMPORTANT: Although potatoes may have good outside color, oftentimes the interior color may be lacking. To produce salable potatoes demanded by the market it is essential to very carefully select seed for inside color. After the seed is treated a slight cut should be made at the stem end and examined for a deep orange or salmon color. Then one-half to one inch of the root or opposite end should be cut to see if the color extends through the potato. Only potatoes with deep orange or salmon color extending through the potato should be used. The cut surfaces should be treated with finely ground sulphur to prevent rotting in the beds.

If it is impossible to select all seed for interior color, at least that part that will be used for producing seed for next year should receive this attention.

SELECT FOR SHAPE: In selecting seed, only those potatoes that are well shaped should be used. Potatoes showing a tendency to stringiness, or marred by growth cracks or other undesirable characteristics should not be used.

FREEDOM FROM DISEASE ESSENTIAL: Many of the diseases affecting sweet potatoes are carried over from year to year in the seed. This includes the dreaded wilt, black rot and scurf. For quality production it is essential that only potatoes free from these diseases should be used as seed-stock. The best insurance in this matter is to use CERTIFIED SEED, which are seed that have been inspected both in the field and in storage by proper officials and certified to be free from diseases. Where it is impossible to plant the entire crop with certified seed, it is doubly important to plant that part of the crop which will be saved for next year's seed with CERTIFIED stock.

To assure the Carolinas of remaining a factor and in increasing our stature, let's all determine to use the very best seed and production practices.

If you need new seed stock, consult your DEALER, your COUNTY AGENT, or write the Council's Secretary immediately. Address: Office of the Secretary, Room 315, ACL RR Bldg. "C", Wilmington, N. C.

Summary of Carlot Shipments of Sweet Potatoes

Shipping Districts and Approximate Shipping Seasons	Jan. 19-25 1947	Jan. 12-18 1947	Jan. 20-26 1946	Total This Season Thru Jan. 25	Total Last Season Thru Jan. 26	Total Last Season
Calif. C. Dist. August 25-April 10	0	9	2	372	360	378
Louisiana July 15-June 15...	134	128	184	4935	6380	9168
New Jersey September 1-May 10	13	11	11	303	262	334
North Carolina August 1-May 31..	11	12	16	179	175	343
South Carolina August 1-May 10	18	15	10	418	355	488
Tennessee August 15-July 15..	9	7	7	319	247	440
Texas August 25-May 15.	26	31	38	391	608	807
Other Sections	0	2	9	1229	1770	1786
TOTAL	211	215	277	8146	10157	13742

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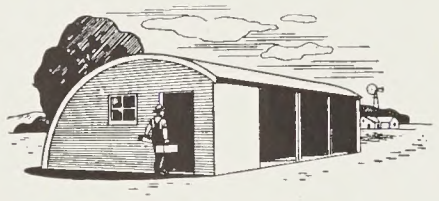

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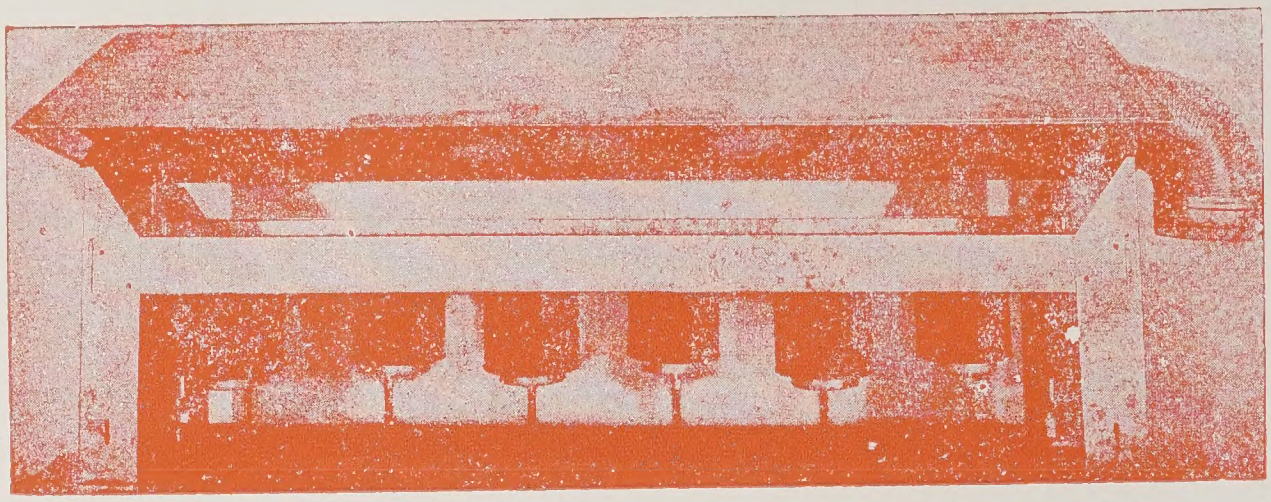

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2. You had to stay in the hot barn too long, regulating each individual burner to the exact heat you desired.

The BRA-HIL CURER — 1947 MODEL — has overcome these complaints and added many new features which make it the very best tobacco curer on the market today.

See your BRA-HIL dealer *today*. Ask him to show you the below-listed exclusive features of the 1947 Model BRA-HIL PRE-HEAT Tobacco Curer:

1. Flare resistant — no flickering, flaring or going out. No flues or stacks required.

2. No adjustments of each individual burner; simply light burners and then control heat by carburetor on outside of barn.

3. No raising or lowering device on individual burners, allowing burners to swing completely around. This arrangements, along with the diamond-shaped pre-heat hood, allows you to shift the heat to any given spot in the barn by merely swinging the burners toward the spot you want the extra heat. The dual controlled carburetor (two sets of burners to each side of control) also aids in shifting the heat to the windward side.

4. Hood is so designed that intake air passes through the diamond-shaped pre-heat hood, pre-heating and conditioning the air before reaching the tobacco. This method of air intake prevents the air from coming directly on top of the burners, causing flickering and flaring.

5. *Only* BRA-HIL curers pre-heat the air coming into the barn. This pre-heating conditions the air which prevents condensation and sweating, promotes even coloring and curing, and does not set tobacco green above curers.

6. Rigid construction — Factory-made to exacting specifications — Heavy weight galvanized sheet steel — All parts are interchangeable and will fit perfectly if replacements parts are ever needed.

7. Compare the oil consumption of the BRA-HIL Tobacco Curer with any other type of tobacco curer on the market. You will find that it cures tobacco *better* at a *lower* cost to you.

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